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POSTER

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Not for publication, except in the conference proceedings.

"Investigating Photon Dominated Regions: Near-Infrared Observations of Planetary Nebulae with HST/NICMOS" -- (title may change)

Exposure of molecular clouds and circumstellar envelopes to intense UV radiation results in the formation of regions in which the chemistry and physics are dominated by the presence of a time-varying UV field. Much of the important physics of the early and late stages of stellar evolution is similar, because of high gas densities and the often dominating influence of UV photons. Progress of a comprehensive study to understand in detail the physical and chemical evolution of circumstellar gas in both the early and late stages of stellar evolution will be discussed. In particular, exciting new data from HST/NICMOS of post-asymptotic giant stars and planetary nebulae will be presented. These data reveal with new clarity the complex structures in UV excited components and the transition between atomic and molecular regions. Observations with SIRTf promise to reveal other key aspects of photon dominated regions.